

I claim:

1.

A railroad grade crossing for extending a roadway across a pair of parallel, spaced-apart rails which are supported upon spaced-apart ties, comprising:

a concrete gauge panel extending substantially between the rails;

said gauge panel having a top surface which is substantially coplanar with the roadway;

said gauge panel having opposite sides and opposite ends;

said gauge panel having elongated gauge seals on each side thereof which are positioned adjacent the rails;

each of said gauge seals having inner and outer sides and opposite ends;

each of said gauge seals having an elongated cavity formed therein inwardly of the inner side thereof which extends between the ends thereof;

said gauge panel having metal angle members case in said upper opposite sides;

each of said metal angle members including a vertical leg portion;

each of said vertical leg portions of said metal angle members having a plurality of horizontally spaced-apart bolt members secured thereto and extending therefrom through the inner side of the respective seal and into said cavity thereof;

at least one elongated metal retainer positioned in each of said cavities;

each of said retainers having inner and outer sides;

each of said retainers having a plurality of horizontally spaced-apart openings formed therein;

each of said retainers having a plurality of internally threaded nuts welded thereto at  
each of said openings and in alignment therewith;  
said bolt members being threadably secured to said nuts.

2.

The railroad grade crossing of claim 1 wherein each of said cavities is generally  
channel-shaped.

3.

The railroad grade crossing of claim 2 wherein said retainers are generally  
channel-shaped in section.

4.

The railroad grade crossing of claim 2 wherein each of said cavities comprises  
an upper cavity portion having inner and outer ends, an intermediate cavity portion  
extending downwardly from said outer end of said upper cavity portion, and a lower  
cavity portion, having inner and outer ends, extending from the lower end of said  
intermediate cavity portion towards said inner side of the respective seal.

5.

The railroad grade crossing of claim 4 wherein said retainers are generally  
channel-shaped in section.

6.

The railroad grade crossing of claim 5 wherein each of said retainers includes an  
upper flange which is received by said upper cavity portion, a web which is received by

1 said intermediate cavity portion, and a lower flange which is received by said lower  
cavity portion.

7.

5 The railroad grade crossing of claim 6 wherein said nuts are secured to said  
webs of said retainers.

8.

The railroad grade crossing of claim 7 wherein said webs have inner and outer  
sides and wherein said nuts are welded to said inner side of said webs.

9.

10 A railroad grade crossing for extending a roadway across a pair of parallel,  
spaced-apart rails which are supported upon spaced-apart ties, comprising:

a concrete gauge panel extending substantially between the rails;

said gauge panel having a top surface which is substantially coplanar with the roadway;

15 said gauge panel having opposite sides and opposite ends;

said gauge panel having elongated gauge seals on each side thereof which are  
positioned adjacent the rails;

each of said gauge seals having inner and outer sides and opposite ends;

20 each of said gauge seals having an elongated cavity formed therein inwardly of the  
inner side thereof which extends between the ends thereof;

said gauge panel having metal angle members case in said upper opposite sides;

each of said metal angle members including vertical leg portions;

each of said vertical leg portions of said metal angle members having a plurality of  
1 horizontally spaced-apart bolt members secured thereto and extending therefrom  
through the inner side of the respective seal and into said cavity thereof;  
at least one elongated metal retainer positioned in each of said cavities;  
5 each of said retainers having inner and outer sides;  
each of said retainers having a plurality of horizontally spaced-apart openings formed  
therein;  
each of said retainers having a plurality of internally threaded nuts welded thereto at  
each of said openings and in alignment therewith;  
10 said bolt members being threadably secured to said nuts;  
a pair of concrete field panels, one of which extends between each rail and the  
roadway;  
each of said concrete field panels having an inner end, an outer end, a top surface  
15 which is substantially coplanar with the roadway, and a bottom surface which is  
supported upon the ties;  
said field panels having elongated field seals at their inner ends thereof which are  
positioned adjacent the associated rail;  
20 each of said field seals generally having an inner end, an outer end, an upper end, and  
a lower end;  
each of said field seals having an elongated cavity formed therein inwardly of the inner  
side thereof which extends between the ends thereof;  
the upper inner end of said field panels having a metal angle member cast therein;

each of said metal angle members including vertical leg portions;

each of said vertical leg portions of said metal angle members having a plurality of horizontally spaced-apart bolt members secured thereto and extending therefrom through the inner side of the respective seal and into said cavity thereof;

at least one elongated metal retainer positioned in each of said cavities;

each of said retainers having inner and outer sides;

each of said retainers having a plurality of horizontally spaced-apart openings formed therein;

each of said retainers having a plurality of internally threaded nuts welded thereto at each of said openings and in alignment therewith;

said bolt members being threadably secured to said nuts.

10.

The railroad grade crossing of claim 9 wherein each of said cavities is generally channel-shaped.

11.

The railroad grade crossing of claim 10 wherein said retainers are generally channel-shaped.

12.

The railroad grade crossing of claim 10 wherein each of said cavities comprises an upper cavity portion having inner and outer ends, an intermediate cavity portion extending downwardly from said outer end of said upper cavity portion, and a lower

1 cavity portion, having inner and outer ends, extending from the lower end of said  
intermediate cavity portion towards said inner side of the respective seal.

13.

5 The railroad grade crossing of claim 12 wherein said retainers are generally  
channel-shaped.

14.

10 The railroad grade crossing of claim 13 wherein each of said retainers includes  
an upper flange which is received by said upper cavity portion, a web which is received  
by said intermediate cavity portion, and a lower flange which is received by said lower  
cavity portion.

15.

15 The railroad grade crossing of claim 14 wherein said nuts are secured to said  
webs of said retainers.

16.

The railroad grade crossing of claim 15 wherein said webs have inner and outer  
sides and wherein said nuts are welded to said inner side of said webs.

17.

20 A railroad grade crossing for extending a roadway across a pair of parallel,  
spaced-apart rails which are supported upon spaced-apart ties, comprising:  
a pair of concrete field panels, one of which extends between each rail and the  
roadway;

1 each of said concrete field panels having an inner end, an outer end, a top surface  
which is substantially coplanar with the roadway, and a bottom surface which is  
supported upon the ties;

5 said field panels having elongated field seals at their inner ends thereof which are  
positioned adjacent the associated rail;

each of said field seals generally having an inner end, an outer end, an upper end, and  
a lower end;

each of said field seals having an elongated cavity formed therein inwardly of the inner  
side thereof which extends between the ends thereof;

10 the upper inner end of said field panels having a metal angle member cast therein;

each of said metal angle members including vertical leg portions;

each of said vertical leg portions of said metal angle members having a plurality of  
horizontally spaced-apart bolt members secured thereto and extending therefrom

15 through the inner side of the respective seal and into said cavity thereof;

at least one elongated metal retainer positioned in each of said cavities;

each of said retainers having inner and outer sides;

each of said retainers having a plurality of horizontally spaced-apart openings formed  
therein;

20 each of said retainers having a plurality of internally threaded nuts welded thereto at  
each of said openings and in alignment therewith;

said bolt members being threadably secured to said nuts.

18.

1       The railroad grade crossing of claim 17 wherein each of said cavities is generally channel-shaped.

19.

5       The railroad grade crossing of claim 18 wherein said retainers are generally channel-shaped.

20.

10       The railroad grade crossing of claim 18 wherein each of said cavities comprises an upper cavity portion having inner and outer ends, an intermediate cavity portion extending downwardly from said outer end of said upper cavity portion, and a lower cavity portion, having inner and outer ends, extending from the lower end of said intermediate cavity portion towards said inner side of the respective seal.

21.

15       The railroad grade crossing of claim 20 wherein said retainers are generally channel-shaped.

22.

20       The railroad grade crossing of claim 21 wherein each of said retainers includes an upper flange which is received by said upper cavity portion, a web which is received by said intermediate cavity portion, and a lower flange which is received by said lower cavity portion.



23.

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The railroad grade crossing of claim 22 wherein said nuts are secured to said webs of said retainers.

24.

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The railroad grade crossing of claim 23 wherein said webs have inner and outer sides and wherein said nuts are welded to said inner side of said webs.

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